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From: Graves, Brian

Sent: Monday, January 06, 2014 9:02 AM **To:** R6 6WQ-SG;Lawrence, Rob;Dwyer, Stacey

Cc: Susie Mckenzie

Subject: FW: From EnergyWire -- EARTHQUAKES: Texas officials might study quakes near

injection wells

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Subject: From EnergyWire -- EARTHQUAKES: Texas officials might study quakes near injection wells

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ENERGYWIRE

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EARTHQUAKES: Texas officials might study quakes near

injection wells (Monday, January 6, 2014)

Mike Soraghan and Mike Lee, E&E reporters

State officials in Texas are looking into doing a study of whether drilling activities are related to the earthquakes that have rattled the western edge of the Dallas-Fort Worth metropolitan area since November.

Texas Railroad Commissioner David Porter, one of three elected officials who run the agency that regulates oil and gas in the state, floated the possibility of a study in a news release Friday.

He said he's contacted State Geologist Scott Tinker at the Texas Bureau of Economic Geology (BEG) "in regards to a potential study."

The BEG is housed at the University of Texas, Austin. The bureau's colleagues at the university's Institute for Geophysics are drafting a proposal about what they would be able to do and how much it would cost. But all the details are preliminary.

"No arrangements have been finalized at this time," said Porter spokeswoman Katie Carmichael.

Since early November, 26 earthquakes have rattled the area around Azle, Texas, about 20 miles northwest of Fort Worth, according to U.S. Geological Survey data. Many residents believe the quakes are being caused by injection of wastewater from hydraulic fracturing and oil and gas drilling. There are three injection wells in the area.

No injuries have been reported, and local officials say there's been no major damage. But people who live in the area say they've seen cracks appear or get worse in their walls and floors after earthquakes.

Porter's announcement came the morning after he held a contentious town hall meeting in Azle, the city at the center of the burst of seismic activity. Eight hundred fifty people packed into the meeting, called by Porter after local officials complained about his agency's response. But many grew frustrated when Porter said he and other officials wouldn't be answering questions (*EnergyWire*, Jan. 3).

In his news release, Porter defended his handling of the meeting.

"In order to hear from as many people as possible, we were unable to take individual questions or give detailed answers to everyone present," Porter said in the release.

Porter's release added that the Railroad Commission inspected every disposal well in the affected area, and no violations have been detected. But the agency's rules don't address wells causing earthquakes.

Azle sits over the Barnett Shale natural gas field, which is home to thousands of wells. Studies in the Barnett and elsewhere have shown a correlation between earthquakes and the injection wells used to dispose of wastewater from oil and gas operations.

Hydraulic fracturing -- which uses millions of gallons of water under high pressure to break up rock formations -- hasn't been linked to damaging earthquakes. But it creates large amounts of wastewater.

Researchers from Southern Methodist University and the Geological Survey are already examining data from four portable seismic recorders set up in the area in December.

In the next few weeks, SMU researchers are planning to deploy more than 15 more instruments from other sources, Heather DeShon, the geophysics professor leading the research team, said Friday.

EnergyWire reported in December that the Railroad Commission's stance on earthquakes is at odds with the scientific community's consensus on the role of injection wells (<u>EnergyWire</u>, Dec. 18, 2013). Researchers linked waste disposal to a series of earthquakes at the Rocky Mountain Arsenal near Denver as far back as the 1960s. More recently, Ohio imposed a set of stricter new rules after a rash of quakes near Youngstown was linked to a disposal well in 2012.

In Texas, three injection wells in the Dallas area have been voluntarily shut down by the operator after earthquakes nearby. Researchers have linked injection to earthquakes in the Barnett Shale in North Texas and the Haynesville Shale in East Texas.

Porter's release also noted the Railroad Commission staff is participating in a work group formed by U.S. EPA on the issue.

The work of that group, officially called the Underground Injection Control National Technical Workgroup, has stalled. It completed a draft report that was distributed in December 2012 to participants for comments. EPA has said it is weighing those comments before it sends it for peer review, but there is no date set for completing it (*EnergyWire*, July 22, 2013).